



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Kobayashi, Migaku

Serial No.: 10/060,569

Filing Date: 01/29/2002

Title: Method of Fabricating a  
Semiconductor Device

Attorney Docket No.: N230500C1

Examiner: N/A

Group Art Unit: 1763

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Assistant Commissioner for Patents  
Washington, D.C. 20231

**INFORMATION DISCLOSURE STATEMENT**

Dear Sir:

This Information Disclosure Statement is submitted:

☐ under 37 CFR 1.97(b), or  
(Within three months of filing national application; or date of entry of international application; or before mailing date of first office action on the merits; whichever occurs last)

☒ under 37 CFR 1.97(c) together with either a:

☒ Certification under 37 CFR 1.97(e), or

☐ a \$240.00 fee under 37 CFR 1.17(p), or

(After the CFR 1.97(b) time period, but before final action or notice of allowance, whichever occurs first)

☐ under 37 CFR 1.97(d) together with a:

☐ Certification under 37 CFR 1.97(e), and

☐ a petition under 37 CFR 1.97(d)(2)(ii), and

☐ a \$130.00 petition fee set forth in 37 CFR 1.17(i)(1).

(Filed after final action or notice of allowance, whichever occurs first, but before payment of the issue fee)

☒ Applicant(s) submit herewith an Information Disclosure Citation together with copies, of patents, publications or other information of which applicant(s) are aware, which applicant(s) believe(s) may be material to the examination of this application and for which there may be a duty to disclose in accordance with 37 CFR 1.56.

The relevance of the attached references is that this is the closest art of which Applicant is aware.

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STATEMENT UNDER 37 CFR 1.97(e)

Sir:

The undersigned hereby certifies that either:

- (X) Each item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, not more than three months prior to the filing of the statement, or
- ( ) No item of information contained in the Information Disclosure Statement
- was cited in a communication from a foreign patent office in a counterpart foreign application, and
- to the knowledge of the undersigned, after making reasonable inquiry, was known to an individual designated in 37 CFR 1.56 (c) more than three months prior to the filing of the Information Disclosure Statement.

Respectfully Submitted,

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner of Patents, Washington, D.C. 20231.

Date of Deposit: June 6, 2002

Typed/Printed Name: Darryl Walker

Signature: Darryl Walker

By Darryl Walker  
Darryl Walker  
Attorney/Agent for Applicant(s)  
Reg. No.: 43232

Date: June 6, 2002

Telephone No.: 1-408-289-5314



Auerbach International Inc.  
Translation job code WKG329JE

Date mailed: March 20, 2002

In the cited reference 1 (particularly note the description concerning the working example 1), an invention is described in which an aluminum film is formed after, using an etch-back method, removing tungsten, TiN, and Ti layers on the insulating layer that also covers the inside of an opening, on which firstly Ti and TiN films are formed and secondly a tungsten film is formed over these first layers with a directional sputtering method such as long-distance sputtering.

Also in the cited reference 2, an invention is described in which TiN, Ti, and tungsten layers are etched separately using selective gases for tungsten, TiN, and Ti when removing these conductive layers over the insulating layer, which has the same three-layer structure as the invention described in the cited reference 1.

In the cited reference 3, an ionized metal plasma method is described as well.

Applicant submits that the above references taken alone or in combination neither anticipate nor render obvious the present invention. Consideration of the foregoing in relation to this application is respectfully requested.

It is requested that the information disclosed herein be made of record in this application.

Respectfully submitted,



**Darryl G. Walker**  
Attorney/Agent for Applicant(s)  
Reg. No. 43,232

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